

# Sentinel Conservation Area

## Ten-Year Area Management Plan FY 2015-2024



*Lisa B. Allen*

Forestry Division Chief

*8-24-15*

Date

## Sentinel Conservation Area Management Plan Approval Page

### PLANNING TEAM

Brice Kelso, Resource Forester

Kyle Hedges, Wildlife Management Biologist

Rhonda Rimer, Natural History Biologist

Adam Boman, Fisheries Management Biologist

Brian Boyd, Conservation Agent

Andy Rhodes, Outdoor Skills Specialist

Landry Jones, Private Land Conservationist

### SOUTHWEST REGION

SW RCT Chair

Garret Aebright  
Signature

8/17/15  
Date

### FORESTRY DIVISION

Forest Management Chief

John Tuttle  
Signature

8/24/15  
Date

## OVERVIEW

- **Official Area Name:** Sentinel Conservation Area, # 6532
- **Year of Initial Acquisition:** 1965
- **Acreage:** 160 acres
- **County:** Polk
- **Division with Administrative Responsibility:** Forestry
- **Division with Maintenance Responsibility:** Forestry
- **Statements of Purpose:**

### A. Strategic Direction

Sentinel Conservation Area (CA) was developed for the restoration, conservation, management and enhancement of natural communities, and to provide for public use of the area's resources. The area is managed to provide opportunities for private landowners to learn about active forest management and to provide the public with opportunities to enjoy outdoor recreational activities.

### B. Desired Future Condition

The desired future condition of Sentinel CA is a healthy, diverse and sustainable mosaic of glade and woodland natural communities, which provide habitat to a wide variety of plants and animals.

### C. Federal Aid Statement

This area, or a portion thereof, was acquired with Pittman–Robertson Wildlife Restoration funds to restore and manage wildlife, conserve and restore suitable wildlife habitat and provide public access for hunting or other wildlife-oriented recreation.

## GENERAL INFORMATION AND CONDITIONS

### I. Special Considerations

- A. **Priority Areas:** Pomme de Terre Terrestrial Conservation Opportunity Area
- B. **Natural Areas:** None

### II. Important Natural Features and Resources

- A. **Species of Conservation Concern:** None observed.
- B. **Caves:** None
- C. **Springs:** None
- D. **Other:** Occurs in the Pomme de Terre Dolomite Glade/Woodland Landtype Association. This landtype consists of moderately dissected, steep-sided hills associated with the lower Pomme de Terre River. The region is underlain predominantly by Jefferson City-Cotter dolomites. Historically, this area was

dominated by mixed-oak dry chert woodlands with interspersed dolomite glade/woodland complexes (Nigh & Schroeder, 2002).

### **III. Existing Infrastructure**

- One parking lot in the central part of the area

### **IV. Area Restrictions or Limitations**

- A. Deed Restrictions or Ownership Considerations:** None
- B. Federal Interest:** Uses of land acquired with federal funds may not interfere with the purpose for which it was acquired. Federal funds may also be used in the management of this land. Fish and wildlife agencies may not allow recreational activities and related facilities that would interfere with the purpose for which the State is managing the land. Other uses may be acceptable and must be assessed in each specific situation.
- C. Easements:** Yes, perpetual roadway easement with Polk County
- D. Cultural Resources Findings:** No known cultural resources.
- E. Hazards and Hazardous Materials:** None observed.
- F. Endangered Species:** None observed.
- G. Boundary Issues:** Establishing accurate and identifiable boundary markers is a priority for this property.

## **MANAGEMENT CONSIDERATIONS**

### **V. Terrestrial Resource Management Considerations**

#### **Challenges and Opportunities:**

- 1) Remove early infestations of invasive exotic plants currently found on the area (e.g., Japanese honeysuckle) and the threat of future invasive plant infestations.
- 2) Manage impacts of removal of wildfire and other natural disturbances from natural communities, e.g.,
  - Overstocked glades and woodlands (too many trees per acre);
  - Tree species composition shift from shade tolerant, fire intolerant species;
  - Major loss of diversity and abundance of ground layer herbaceous vegetation and tree regeneration.
- 3) Maintain healthy, sustainable and diverse woodlands which are approaching biological maturity and are mostly even-aged.
- 4) Demonstrate to the public the benefits of important glade and woodland management practices (e.g., exotic invasive control, prescribed fire, thinning).
- 5) Enhance wildlife habitat by implementing various management techniques.

**Management Objective 1:** Improve and maintain natural communities.

**Strategy 1:** Conduct an initial forest inventory on the area to help guide proper management decisions going forward. (Forestry)

**Strategy 2:** Reduce exotic invasive species populations to levels which will have negligible impact to natural communities and can be kept in check via routine scouting and minor control efforts. Invasive species management will be completed using a combination of Missouri Department of Conservation (Department) staff and/or contractors. (Forestry)

**Strategy 3:** Reduce tree stocking in glades and woodlands to promote early successional habitat and to keep a pattern of natural disturbance within both natural communities. Various management practices (e.g., prescribed fire) will be completed using Department staff and/or contractors. (Forestry, Wildlife, Private Lands Services)

**Strategy 4:** Stimulate herbaceous vegetation in order to increase desirable regeneration in woodlands. Various management practices (e.g., non-commercial thinning) will be implemented utilizing Department staff and/or contractors. (Forestry, Wildlife, Private Lands Services)

**Management Objective 2:** Provide glade and woodland management demonstration sites and interpretation that reveal to the public the benefits of proactive management activities.

**Strategy 1:** Strategically locate some of the projects described above in Objective 1, in areas which are visible to the public with good opportunities for interpretation (e.g., signage, programs, etc.). (Forestry)

**VI. Aquatic Resource Management Considerations**

**Challenges and Opportunities:**

Maintain and enhance the integrity of all riparian corridors within the conservation area.

**Management Objective 1:** Manage the entire area (particularly riparian corridors) in ways that maintain and improve water quality.

**Strategy 1:** Encourage and maintain healthy riparian corridors and associated vegetation throughout the area. (Forestry, Fisheries)

**Strategy 2:** Address future accelerated erosion along all streams and drainages. (Forestry, Fisheries)

**Strategy 3:** Conduct management activities on the area in accordance with state forest management guidelines (Missouri Department of Conservation, 2009) and

recommend protection practices for Missouri forests (Missouri Department of Conservation, 2014). (Forestry)

**Strategy 4:** Roadways will be managed according to appropriate best management practices to minimize runoff and sedimentation into stream resources. (Forestry, Design and Development)

## **VII. Public Use Management Considerations**

### **Challenges and Opportunities:**

Manage high public use of the area, especially during the opening weekend of firearms deer season.

**Management Objective 1:** Ensure proper use of the area by all users.

**Strategy 1:** Protection Division will periodically patrol the area to ensure compliance with area regulations. (Protection)

**Management Objective 2:** Maintain the area in a way that invites the public to use the property.

**Strategy 1:** Mark and maintain boundary lines. (Forestry)

**Strategy 2:** Maintain cleanliness of parking lot and allow for proper ingress and egress. (Forestry)

## **VIII. Administrative Management Considerations**

### **Challenges and Opportunities:**

Survey existing un-surveyed boundaries on Sentinel CA.

**Management Objective 1:** Maintain accurate boundaries in order to minimize unauthorized use of public land and to minimize potential conflicts with neighboring landowners.

**Strategy 1:** Request a boundary survey and seek resolution, if any issues arise with neighboring landowners. (Forestry)

### **Lands Proposed for Acquisition:**

When available, adjacent lands may be considered for acquisition from willing sellers. Tracts that improve area access, provide public use opportunities, contain unique natural communities and/or species of conservation concern, or meet other Department priorities, as identified in the annual Department land acquisition priorities, may be considered (Forestry).

## MANAGEMENT TIMETABLE

Strategies are considered ongoing unless listed in the following table:

	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>FY19</b>	<b>FY20</b>	<b>FY21</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>
<b>Terrestrial Resources Management</b>										
<i>Objective 1</i>										
Strategy 1		X								
Strategy 3	X		X		X		X			
Strategy 4				X		X		X		X
<i>Objective 2</i>										
Strategy 1		X				X				

## APPENDICES

### Area Background:

Sentinel Conservation Area was purchased and developed in 1965 using Wildlife Restoration funds to provide for the enhancement of wildlife habitat and outdoor recreational activities. The area is located 4.6 miles north of Polk on Route D/Highway 64, 1.9 miles west and north on East 328<sup>th</sup>/167<sup>th</sup> Road, back west and south 1 mile on East 320<sup>th</sup>/163<sup>rd</sup> Road, and 0.3 miles on East 325<sup>th</sup> Road where the sign is posted.

### Current Land Types:

Land Type	Acres	% of Area
Woodland	110	69
Glade	50	31
<b>Total</b>	<b>160</b>	<b>100</b>

### Public Input Summary:

The draft Sentinel Conservation Area Management Plan was available for a public comment period April 1–30, 2015. The Missouri Department of Conservation received one comment (Appendix A). The Sentinel Conservation Area Planning Team carefully reviewed and considered these ideas as they finalized this document. A brief summary of public input themes, including how they were incorporated or why they were not, can be found below. Rather than respond to each individual comment, comments are grouped into general themes and are addressed collectively.

Department responses to themes and issues identified through Sentinel Conservation Area public comment period

### Would like to know whether there will be any major changes at Sentinel Conservation Area.

The area manager was able to contact this commenter and explain the details of the 2015 Area Management Plan over a phone conversation, after which the person stated that they had no concerns going forward.

### References:

Missouri Department of Conservation. (2009). *Watershed and stream management guidelines for lands and waters managed by Missouri Department of Conservation*. Jefferson City, Missouri: Missouri Department of Conservation.



Missouri Department of Conservation. (2014). *Missouri watershed protection practice recommended practices for Missouri forests: 2014 management guidelines for maintaining forested watersheds to protect streams*. Jefferson City, Missouri: Conservation Commission of the State of Missouri.

Nigh, T. A., & Schroeder, W. A. (2002). *Atlas of Missouri ecoregions*. Jefferson City, Missouri: Missouri Department of Conservation.

**Maps:**

Figure 1: Area Map

Figure 2: Aerial Map

Figure 3: Topographic Map

Figure 4: Current Vegetation Map

**Additional Appendices:**

Appendix A: Sentinel Conservation Area Management Plan Public Comments



**Figure 2: Aerial Map**

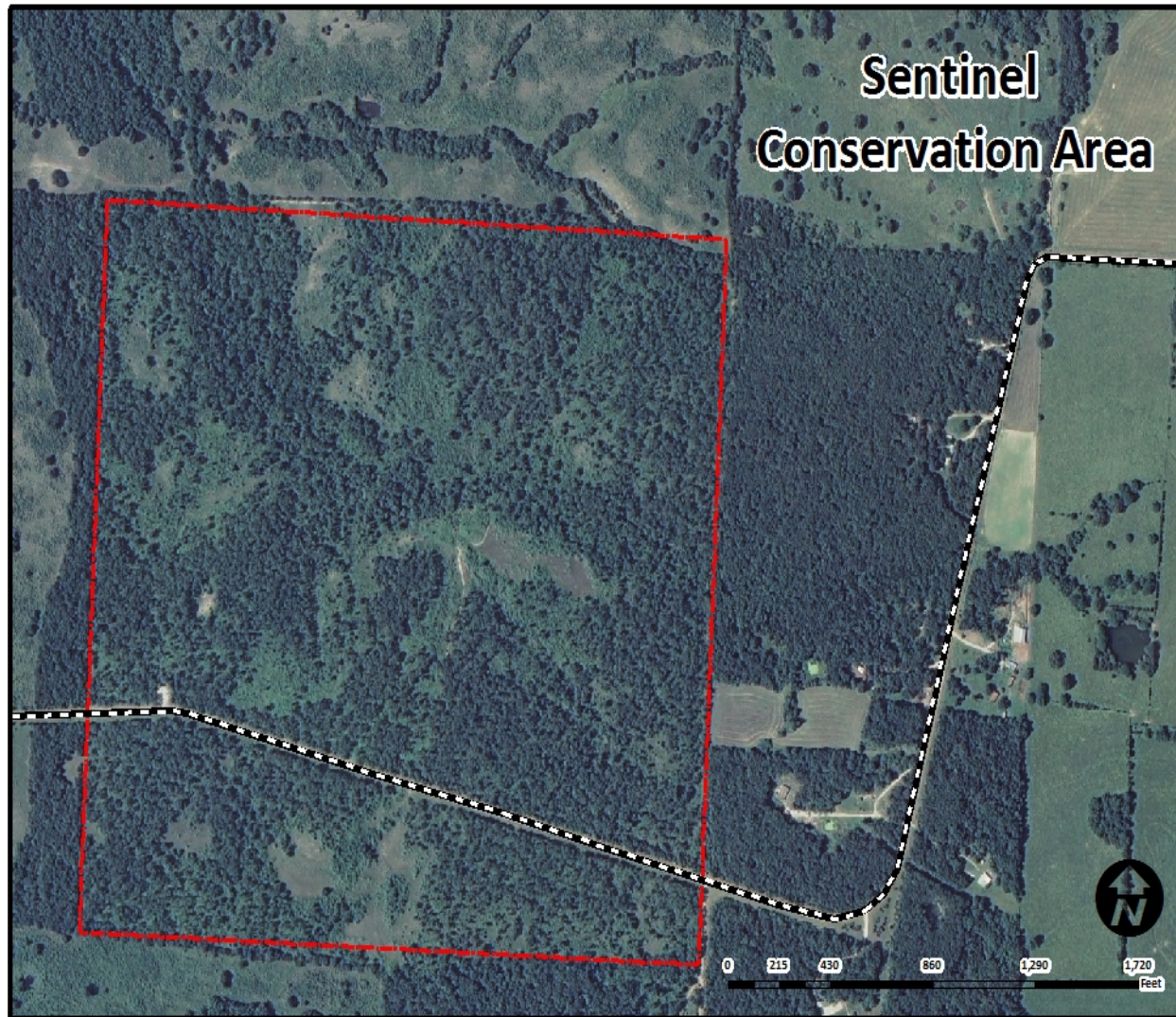




Figure 3: Topographic Map

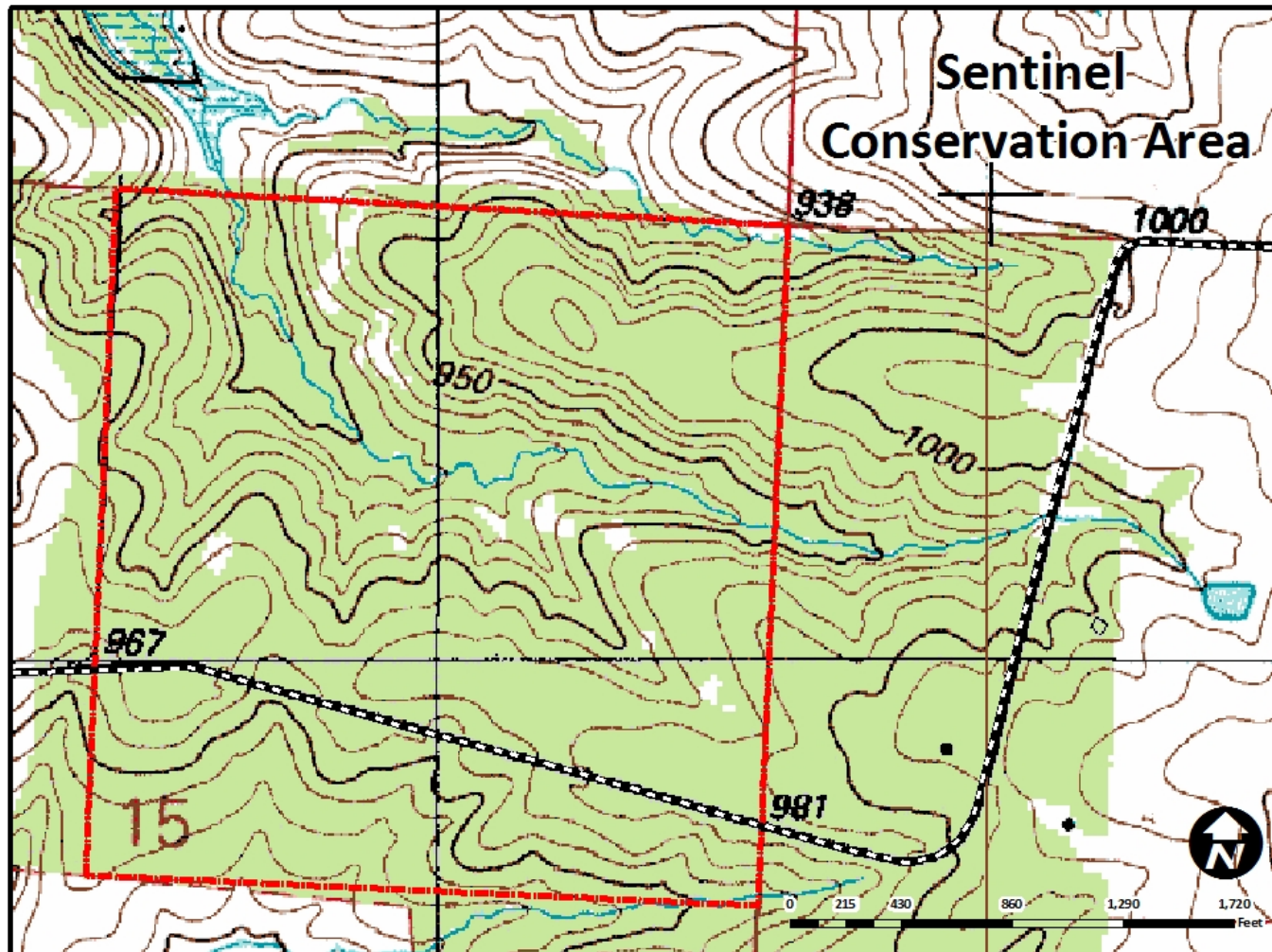
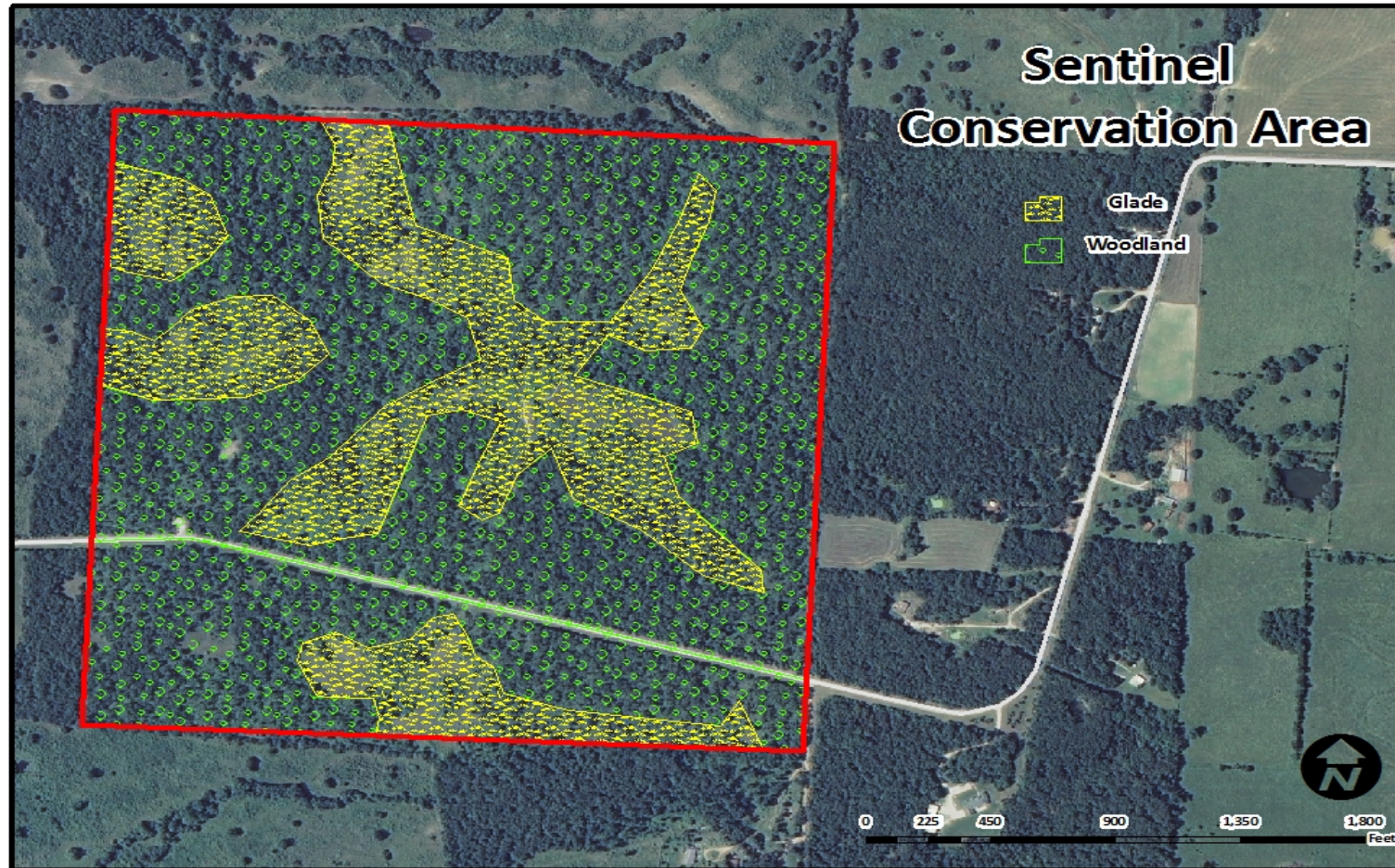


Figure 4: Current Vegetation Map





## **Appendix A: Sentinel Conservation Area Management Plan Public Comments**

Received during public comment period (April 1-30, 2015):

Hard copy comment (received 4/1/2015): I'm just making certain no major changes will come about.
--